

**In the Specification:**

Please insert at Page 1, line 3, the following paragraph:

**RELATED PATENT APPLICATION**

This application is a National Phase Application of PCT/IL03/00291 having International Filing Date of 7 April 2003, which claims the benefit of U.S. Provisional Patent Application No. 60/441,159 filed 21 January 2003, and U.S. Provisional Patent Application No. 60/442,903 filed 28 January 2003. The contents of the above Applications are all incorporated herein by reference.

Please amend the paragraph beginning on Page 3, line 13, as follows:

According to a broad aspect of the present invention, there is provided stereoscopic display apparatus comprising: two projectors having inputs connectable to a source of digital data representing the color components sets of two stereoscopic images, each of ~~the said~~ projectors having an output outputting an optical beam having a set of color components in which at least one color component of the set is of an orthogonal polarization state with respect to the other color components of the set; a polarization preserving screen; an optical filter system using exclusively optical retarders to manipulate ~~the said~~ polarization states for transforming the polarization states polarizing the output beams of the optical beams outputted by the two projectors into two color sets in which all the color components of one set are polarized in one polarization state and all the color components of the other set are polarized in an orthogonal polarization state desired mutually orthogonal polarization states; polarizing clean-up filters for increasing the polarization ratio of the output beams; and stacking means for stacking ~~the said~~ two color sets onto ~~the said~~ polarization preserving screen; such as to enable stereoscopic viewing of the two color sets via orthogonally polarized filters.

Please delete the paragraph beginning on Page 3, line 26.

Please delete the paragraph beginning on Page 4, line 3.

Please delete the paragraph beginning on Page 4, line 9.

Please delete the paragraph beginning on Page 4, line 14.

Please delete the paragraph beginning on Page 4, line 17.

Please delete the paragraph beginning on Page 4, line 26.

Please delete the paragraph beginning on Page 5, line 3.

Please insert the following two paragraphs at Page 5, between line 6 and line 7:

Preferably, the optical filter system includes, for each projector, a polarization rectifier which transforms a plurality of color components in different polarization states at the input into the same polarization state at the output by using exclusively the optical retarders for polarization manipulation. Two embodiments of polarization rectifiers are described. In one embodiment, the polarization rectifier includes a stack of optical retarders which align the polarizations of all color components. In second embodiment, the polarization rectifier includes: a splitter which separates the color components into two optical paths, a polarization transformer in at least one optical path which utilizes an optical retarder to transform the respective color component to another polarization state in such manner that mutually orthogonal polarization states are transformed to polarization states that are also mutually orthogonal; and a combiner which combines the two optical paths for stacking onto the polarization preserving screen.

The several embodiments of the invention, described below for purposes of example, differ considerably in many respects. They however share one common feature: all transformations of the main polarization states are done exclusively with optical retarders. This feature is fundamental to the present invention, as it allows the high optical efficiency.

Please amend the paragraph beginning on Page 5, line 7, as follows:

According to another aspect of the invention, there is provided stereoscopic display apparatus comprising: two projection engines having inputs connectable to a source of digital data representing the color components sets of two stereoscopic images, each of ~~said projectors~~ the projection engines having an output outputting an optical beam having a set of color components in which at least one color component of the set is of an orthogonal polarization state with respect to the other color components of the set; a polarization preserving screen; a polarization rectifier for each projector effective to manipulate ~~said~~ the polarization states exclusively by optical retarders, and to transform the beams outputted by the

projection engines to beams in which all color components have the same polarization state in such a manner than the two transformed beams have mutually orthogonal polarizations; a polarization beam ~~splinter~~splitter for combining the transformed beams into one co-axial beam; and a projection lens for imaging the stereoscopic images on ~~said~~the screen.

Please amend the paragraph beginning on Page 13, line 14, as follows:

A block diagram of two polarization rectifiers filter is shown in Fig. 12. The two images sources are coupled directly to the projectors. A different polarization rectifier processes the output of each projector. The polarization rectifier of projector 1 transforms both the  $\alpha$  and the  $\beta$  polarization states to another polarization state  $\gamma$ , and ~~he~~ the polarization rectifier of projector 2 transforms both the  $\alpha$  and the  $\beta$  polarization states to yet another polarization state  $\delta$ , in such a manner that  $\gamma$  and  $\delta$  are mutually orthogonal. The output beams are optionally cleaned up by regular polarizers. It is seen that the correct viewing conditions are created by disposing a  $\gamma$  polarization filter in front of eye no. 1, and a  $\delta$  polarization filter in front of eye no. 2.

Please amend the paragraph beginning on Page 14, line 19, as follows:

The ColorSelect™ filter alone cannot produce a general linear output polarization state, like the filter shown in Fig. 13. A polarization rectifier with an arbitrary linear output polarization state can be created by combining a ColorSelect™ filter with a ~~half-wavelength retarder~~ polarization transformer, as shown in Fig. 14.